

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Wolfgang RUF et al. Confirmation No.: 2423  
Appln. No : 10/072,876 Group Art Unit: 1731  
Filed : February 12, 2002 Examiner: J. Fortuna  
For : LAMELLA OF A HEADBOX OF A PAPER, CARDBOARD OR  
TISSUE MACHINE

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Commissioner for Patents  
U.S. Patent and Trademark Office  
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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

This appeal is from the Examiner's final rejection of claims 1 – 53 as set forth in the Final Office Action of June 1, 2006.

A Notice of Appeal and a Request for Pre-Appeal Brief Review in response to the June 1, 2006 Final Office Action were filed September 1, 2006. Further, a Notice of Panel Decision from Pre-Appeal Brief Review instructing Appellant to proceed to Board of Patent Appeals and Interferences was forwarded October 12, 2006. Accordingly, the instant Appeal Brief is being timely submitted by the initial due date of November 13, 2006 (November 12, 2006 being a Sunday).

The requisite fee under 37 C.F.R. 1.17(c) in the amount of \$ 500.00 for the filing of the Appeal Brief is being paid by check submitted herewith. However, if for any reason the necessary fee is not associated with this file, the undersigned authorizes the charging of any filing fees for the Appeal Brief and/or any necessary extension of time fees to Deposit

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(1) **REAL PARTY IN INTEREST**

The real party in interest is Voith Paper Patent GmbH of Heidenheim, Germany, by an assignment recorded in the U.S. Patent and Trademark Office on February 12, 2002 at Reel 012584 and Frame 0133.

**(2) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending. However, a decision on Appeal No. 2005-1130 in the instant application was mailed July 5, 2005 in which the rejections were affirmed in part and reversed in part.

(3) **STATUS OF THE CLAIMS**

Claims 1 – 53 stand finally rejected.

**(4) STATUS OF THE AMENDMENTS**

No amendments have been entered subsequent to the Final Office Action of June 1, 2006.

**(5) SUMMARY OF CLAIMED SUBJECT MATTER**

The instant invention is directed to a lamella of a headbox of a paper, cardboard or tissue machine. At least one fibrous suspension flows through the headbox, which features a machine-width headbox nozzle having an exit opening. The nozzle has a nozzle length formed by an upper nozzle wall and a lower nozzle wall and a lamella mounted therein. (Page 1, lines 9 – 13).

The following descriptions are made with respect to the independent claim and include references to particular parts of the specification. As such, the following is merely exemplary and is not a surrender of other aspects of the present invention that are also enabled by the present specification and that are directed to equivalent structures or methods within the scope of the claims.

Independent claim 1 is directed to a lamella 10.1, 10.2 of a headbox through which at least one fibrous suspension S flows, the headbox 1 having a machine-width headbox nozzle 7 with a nozzle length  $L_D$  and an exit opening 7.1, and the headbox nozzle 7 being delimited by an upper nozzle wall 13.2 and a lower nozzle wall 13.1, said lamella 10.1, 10.2, which is structured and arranged to be mounted within the headbox nozzle 7. (Specification page 8, line 12 – page 9, line 14; and Figure 1). The lamella 10.1, 10.2 comprises a lamella body 10.1, 10.2 having a downstream lamella end 11.1, 11.2 structured and arranged to be positioned downstream, relative to a suspension flow direction S, of an opposite end of said lamella body 10.1, 10.2, and said downstream lamella end 11.1, 11.2 comprising a first surface (top surface), a portion 12.11, 12.2 coupled to and sloped relative to said first surface, and a second surface (bottom surface), located opposite said first surface, provided with a structured end adjacent said sloped

portion and having at least one structure 12.21, 12.22, 22 integrally formed in or on said second surface. (Specification page 9, lines 7 – 14; page 11, lines 17 – 26; and Figures 3a and 3b).

Independent claim 22 is directed to a headbox 1 for supplying at least one fibrous suspension flows S, in which the headbox 1 includes a headbox nozzle 7 having an exit opening 7.1, and said headbox nozzle 7 and said exit opening 7.1 are delimited by an upper nozzle wall 13.1 and a lower nozzle wall 13.2. (Specification page 8, line 12 – page 9, line 14; and Figure 1). A lamella 10.1, 10.2 is mounted within said headbox nozzle 7 having a downstream lamella end 11.1, 11.2 structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body (adjacent the turbulence producer 5). (Specification page 8, line 12 – page 9, line 14; and Figure 1). Said downstream lamella end 11.1, 11.2 comprises a first surface (top surface), a portion 12.1, 12.2 coupled to and sloped relative to said first surface, and a second surface (bottom surface), located opposite said first surface, being a structured surface having at least one structure 12.21, 12.22, 22 integrally formed in or on said second surface. (Specification page 9, lines 7 – 14; page 11, lines 17 – 26; and Figures 3a and 3b).

Independent claim 44 is directed to a lamella 10.1, 10.2 for a headbox 1 in a fibrous material web production machine, in which the lamella 10.1, 10.2 includes a lamella body 10.1, 10.2 having a first (top) and second surface (bottom) and a mountable end (adjacent turbulence producer 5) and a downstream end 11.1, 11.2 remote from said mountable end (adjacent turbulence producer 5). (Specification page 8, line 12 – page 9, line 14; and Figure 1). Said downstream end 11.1, 11.2, comprises a sloped surface 12.1, 12.2



obliquely oriented with respect to and coupled to said first surface (top) and a second surface (bottom) formed as a structured surface having at least one structure 12.21, 12.22, 22 integrally formed in or on said second surface. (Specification page 9, lines 7 – 14; page 11, lines 17 – 26; and Figures 3a and 3b).

**(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**(A) Claims 1 – 53 are Rejected Under 35 U.S.C. § 112, First Paragraph, as Failing to Comply with the Written Description Requirement;**

**(B) Claims 1 – 53 are Rejected Under 35 U.S.C. § 112, Second Paragraph, as Being Indefinite;**

**(C) Claims 1 - 3, 11, 15, 17 – 23, 31, 35, 37 – 42, 44, and 48 – 50 are Rejected Under 35 U.S.C. § 102(b) as Anticipated by RUF et al. (U.S. Patent No. 5,645,689) [hereinafter “RUF”];**

**(D) Whether Claims 12, 32, 46, and 51 – 53 are Improperly Rejected Under 35 U.S.C. § 103(a) as being unpatentable over RUF in view of SANFORD.**

**(E) Whether Claims 4 – 10, 13, 14, 16, 24 – 30, 33 – 34, 36, 43, and 45 – 47 are Improperly Rejected Under 35 U.S.C. § 103(a) as being unpatentable over RUF.**

(7) **ARGUMENT**

**(A) The Rejection of Claims 1 – 53 Under 35 U.S.C. § 112, First Paragraph, as Failing to Comply with the Written Description Requirement is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts the phrase “integrally formed” has not been described in the specification to convey that Applicants had possession of this feature of the invention at the time the application was filed. Applicants traverse the Examiner’s assertions.

Applicants submit that support for the term “integrally formed” can be found in the originally submitted drawings, particularly Figures 3a and 3b, as originally submitted, as well as in the original text of the specification. A review of the original figures, *see, e.g.*, Figures 3a and 3b reveals the lamella and the structures formed in the lamella surface are formed as one piece. It is apparent these original figures reveal the lamellas and structures formed in or on the lamella surface are formed as one piece, and hence, integrally formed.

Therefore, Applicants submit the original disclosure supports Applicants claims reciting structures formed in or on the surface of the lamella are formed in one piece with each other, such that the these structures are integrally formed in or on the surface of the lamella.

Moreover, as support for the term “integrally formed” is found in the originally submitted disclosure, it is apparent that the inventors did have possession of this subject matter at the time of the invention, such that the Examiner’s assertions to the contrary are improper.

While the Examiner has provided various definitions of “integral” to support his assertions, *see* Advisory Action, it is apparent that, when read in the context of the instant application and amended claims, only the definition “a complete unit, a whole” has any reasonable relation to the invention. Moreover, Applicants have proffered this meaning in prior responses, such that reconsideration of the prior art in view of the clear and unambiguous recitation of integrally formed is requested.

In view of the foregoing, Applicants refer the Board’s attention to, e.g., paragraph [0064] of Applicants’ specification, which states “structured lamella end 11.1 may be *embodied or formed with a grooved structured surface 22.*” Thus, as the disclosure provides that the lamella is *formed* with a grooved structure, it is clear the inventors were in possession of the feature of the grooved structure formed as part of the lamella at the time of the invention. Moreover, Appellants submit this disclosure provides sufficient support for the recitation “integrally formed” in the pending claims.

Further, Applicants submit one ordinarily skilled in the art reviewing the original disclosure and the pending claims would understand that structures formed in or on the lamella surface are formed in one piece with the lamella, as recited in the pending claims. Moreover, Applicants submit the original figures show the lamellas and the structures formed in or on the lamella surface are formed as one piece. Moreover, as the original disclosure, *see, e.g.,* paragraph [0064] of Applicants’ specification, provides support for a recitation of “integrally formed,” (“structured lamella end 11.1 may be *embodied or formed with a grooved structured surface 22*”), one ordinarily skilled in the art would readily understand the invention and be able to ascertain the scope of the claims.

Therefore, Applicants submit support for the subject matter of pending claims 1 – 53

is found in the original disclosure, such that the inventors had possession of the claimed invention at the time the application was filed.

Accordingly, Applicants request the Board reverse the Examiner's decision to finally reject claims 1 – 53 under 35 U.S.C. § 112, first paragraph, and that the application be remanded to the examining group for early allowance.

**(B) The Rejection of Claims 1 – 53 Under 35 U.S.C. § 112, Second Paragraph, as Being Indefinite is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts the term “integrally formed” is not clear and that the metes and bounds of patent protection desired cannot be ascertained from the claims.

For the reasons set forth above, Appellants submit the recitation in the pending claims of “integrally formed” is fully supported by the original disclosure, such that one ordinarily skilled in the art reviewing the specification and claims would readily understand the invention and the scope of the claims.

Moreover, Applicants submit one ordinarily skilled in the art reviewing the original disclosure and the pending claims would understand that structures formed in or on the lamella surface are formed in one piece with the lamella. Moreover, Applicants submit the original figures show the lamellas and the structures formed in or on the lamella surface are formed as one piece. Moreover, as, e.g., paragraph [0064] of Applicants' specification provides support for a recitation of “integrally formed,” (“structured lamella end 11.1 may be *embodied or formed with a grooved structured surface 22*”), one ordinarily skilled in the art would readily understand the invention and be able to ascertain the scope of the claims.

Further, while the Examiner has provided various definitions of “integral” to support

his assertions, see Advisory Action, it is apparent that, when read in the context of the instant application and amended claims, only the definition “a complete unit, a whole” has any reasonable relation to the invention. In this regard, Appellants note the claims are not to be read in a vacuum but within the context of the disclosed invention. Moreover, Applicants have proffered this unitary, one piece meaning in prior responses, such that reconsideration of the prior art in view of the clear and unambiguous recitation of integrally formed is requested.

As the meaning of claim terminology is apparent from a review of Appellants’ original disclosure, and as this meaning is fully in agreement with dictionary definition of “integrally formed,” Applicants submit one ordinarily skilled in the art reviewing the original disclosure and the pending claims would understand that structures formed in or on the lamella surface are formed in one piece with the lamella. Moreover, as Applicants’ original figures show the lamellas and the structures formed in or on the lamella surface are formed as one piece, and as the original disclosure, see, e.g., paragraph [0064] of Applicants’ specification, provides support for a recitation of “integrally formed,” (“structured lamella end 11.1 may be *embodied or formed with a grooved structured surface 22*”), one ordinarily skilled in the art would readily understand the terms recited in the pending claims.

Therefore, Applicants submit the inventors have clearly and unambiguously recited the subject matter of their invention in pending claims 1 – 53 so that one ordinarily skilled in the art, after reviewing the disclosure and drawings, would readily understand the invention and the scope of the invention recited in the pending claims.

Accordingly, Applicants request the Board reverse the Examiner’s decision to finally reject claims 1 – 53 under 35 U.S.C. § 112, second paragraph, and remand the application

to the examining group for early allowance.

**(C) The Rejection of Claims 1 - 3, 11, 15, 17 – 23, 31, 35, 37 – 42, 44, and 48 – 50 Under 35 U.S.C. § 102(b) as Anticipated by RUF is Improper and Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that RUF shows all of the recited features, including a structure 9.6 in lamella 8.6, as shown in Figure 6. Applicants traverse the Examiner's assertions.

***Independent Claim 1:***

Applicants' independent claim 1 recites, *inter alia*, said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a structured end adjacent said sloped portion and having at least one structure *integrally formed* in or on said second surface. Applicants submit RUF fails to show at least the above-noted features of at least the independent claims.

Applicants note that RUF fails to disclose any "structures," as described in the instant application and as recited in at least independent claim 1. That is, Appellants' original disclosure points to structures 12.1, 12.2, and 22, see, e.g., Figures 3a and 3b, which are integrally formed in or on the lamella. However, RUF fails to provide any disclosure of such structures formed in or on the lamella, and certainly no such structures that are integrally formed in or on the lamella, as recited in at least independent claim 1.

At best, Appellants submit RUF discloses elements or pieces added to the lamella, such as end tips or strips. However, Appellants submit these elements or pieces are not the "structures" described in the application and recited in the pending claims. Still further,

Appellants submit, as these elements or pieces in RUF are added to the lamella, and not integrally formed, as recited in at least independent claim 1, RUF fails to anticipate Appellants' invention. Thus, Applicants submit RUF fails to disclose at least the above-noted features of the present invention.

Thus, in contrast to the instant invention, which includes a lamella as a unitary element having structures formed in or on the lamella surface, Figure 6 of RUF shows a "structure," as identified by the Examiner, attached to the lamella, which is an added element or piece. Therefore, Applicants submit RUF fails to provide any disclosure of a lamella having structures integrally formed, i.e., in one piece with, in or on the lamella surface, as recited in at least independent claim 1.

Because the applied reference of RUF fails to disclose each and every element recited in the claims, Appellant submits that RUF fails to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. §102(b). Accordingly, the Board is respectfully requested to reverse the Examiner's decision to finally reject independent claim 1 under 35 U.S.C. § 102(b).

Further, Applicants submit that, as RUF fails to anticipate the above-noted features with regard to the recited lamella and headbox, RUF certainly fails to disclose any of the subject matter related to the arrangement of the lamella elements and/or arrangement of the lamella within the headbox, as recited in at least claims 2, 3, 11, 15, 17 – 21, and 50, and 48 - 50. Moreover, Applicants submit that, as these claims recite additional features and/or arrangements of the lamella and/or headbox, these claims are separately patentable over RUF.

Claim 2:



Appellants submit claim 2 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose the lamella is structured and arranged to be mounted within the headbox nozzle supplying a suspension for forming paper, cardboard or tissue machine, as recited in claim 2.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 2 is improper and should be withdrawn.

Claim 3:

Appellants submit claim 3 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 3.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 3 is improper and should be withdrawn.

Claim 11:

Appellants submit claim 11 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose in combination with the headbox, wherein said lamella is located

within the headbox nozzle and the upper nozzle wall in the area of the exit opening is coupled to an adjustable screen, and wherein said sloped portion is positioned toward the adjustable screen, as recited in claim 11.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 11 is improper and should be withdrawn.

Claim 15:

Appellants submit claim 15 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said lamella has a length that is at least about 80% of the nozzle length, as recited in claim 15.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 15 is improper and should be withdrawn.

Claim 17:

Appellants submit claim 17 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said lamella is structured and arranged to be mounted in a headbox with sectioned consistency control, as recited in claim 17.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus,

Appellants submit the rejection of claim 17 is improper and should be withdrawn.

Claim 18:

Appellants submit claim 18 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said lamella is structured and arranged to be mounted in a headbox designed for a stream velocity of more than about 1,500 m/s, as recited in claim 18.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 18 is improper and should be withdrawn.

Claim 19:

Appellants submit claim 19 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose the stream velocity is more than about 1,800 m/s, as recited in claim 19.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 19 is improper and should be withdrawn.

Claim 20:

Appellants submit claim 20 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to

positively disclose said lamella is structured and arranged to be mounted in a multi-layer headbox, as recited in claim 20.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 20 is improper and should be withdrawn.

Claim 21:

Appellants submit claim 21 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said lamella is structured and arranged to be an intermediate lamella, as recited in claim 21.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 21 is improper and should be withdrawn.

Claim 50:

Appellants submit claim 50 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose the first surface is provided with a non-planar surface, as recited in claim 50.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 50 is improper and should be withdrawn.

***Independent claim 22:***

Applicants' independent claim 22 recites, *inter alia*, said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, being a structured surface having at least one structure *integrally formed* in or on said second surface. Applicants submit RUF fails to show at least the above-noted features of at least the independent claims.

As presented with regard to the features recited in independent claim 1, Applicants note that RUF fails to disclose any "structures," as described in the instant application and as recited in at least independent claim 22. That is, Appellants' original disclosure points to structures 12.1, 12.2, and 22, see, e.g., Figures 3a and 3b, which are integrally formed in or on the lamella. However, RUF fails to provide any disclosure of such structures formed in or on the lamella, and certainly no such structures that are integrally formed in or on the lamella, as recited in at least independent claim 22.

At best, Appellants submit RUF discloses elements or pieces added to the lamella, such as end tips or strips. However, Appellants submit these elements or pieces are not the "structures" described in the application and recited in the pending claims. Still further, Appellants submit, as these elements or pieces in RUF are added to the lamella, and not integrally formed, as recited in at least independent claim 22, RUF fails to anticipate Appellants' invention. Thus, Applicants submit RUF fails to disclose at least the above-noted features of the present invention.

Thus, in contrast to the instant invention, which includes a lamella as a unitary element having structures formed in or on the lamella surface, Figure 6 of RUF shows a "structure," as identified by the Examiner, attached to the lamella, which is an added

element or piece. Therefore, Applicants submit RUF fails to provide any disclosure of a lamella having structures integrally formed, i.e., in one piece with, in or on the lamella surface, as recited in at least independent claim 22.

Because the applied reference of RUF fails to disclose each and every element recited in the claims, Appellant submits that RUF fails to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. §102(b). Accordingly, the Board is respectfully requested to reverse the Examiner's decision to finally reject independent claim 22 under 35 U.S.C. § 102(b).

Further, Applicants submit that, as RUF fails to anticipate the above-noted features with regard to the recited lamella and headbox, RUF certainly fails to disclose any of the subject matter related to the arrangement of the lamella elements and/or arrangement of the lamella within the headbox, as recited in at least claims 23, 31, 35, 37 – 42. Moreover, Applicants submit that, as these claims recite additional features and/or arrangements of the lamella and/or headbox, these claims are separately patentable over RUF.

Claim 23:

Appellants submit claim 23 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 23.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 23 is improper and should be withdrawn.

## Claim 31:

Appellants submit claim 31 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose an adjustable screen coupled to said upper nozzle wall, wherein said sloped portion is positioned toward the adjustable screen, as recited in claim 31.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 31 is improper and should be withdrawn.

## Claim 35:

Appellants submit claim 35 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said nozzle has a nozzle length and said lamella has a length that is at least about 80% of said nozzle length, as recited in claim 35.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 35 is improper and should be withdrawn.

## Claim 37:

Appellants submit claim 37 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said headbox is structured and arranged for sectioned consistency

control, as recited in claim 37.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 37 is improper and should be withdrawn.

Claim 38:

Appellants submit claim 38 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said headbox designed for a stream velocity of more than about 1,500 m/s, as recited in claim 38.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 38 is improper and should be withdrawn.

Claim 39:

Appellants submit claim 39 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose the stream velocity is more than about 1,800 m/s, as recited in claim 39.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 39 is improper and should be withdrawn.

Claim 40:

Appellants submit claim 40 is allowable at least for the reason that it depends from



allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said headbox comprises in a multi-layer headbox, as recited in claim 40.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 40 is improper and should be withdrawn.

Claim 41:

Appellants submit claim 41 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose said lamella is structured and arranged to be an intermediate lamella, as recited in claim 41.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 41 is improper and should be withdrawn.

Claim 42:

Appellants submit claim 42 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose said lamella is fixedly mounted in said headbox nozzle, as recited in claim 42.

Accordingly, Appellants submit the Examiner has failed to provide an adequate

evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 42 is improper and should be withdrawn.

***Independent claim 44:***

Applicants' independent claim 44 recites, *inter alia*, said downstream end comprising a sloped surface obliquely oriented with respect to and coupled to said first surface and a second surface formed as a structured surface having at least one structure *integrally formed* in or on said second surface. Applicants submit RUF fails to show at least the above-noted features of at least the independent claims.

As presented with regard to the features recited in independent claims 1 and 22, Applicants note that RUF fails to disclose any "structures," as described in the instant application and as recited in at least independent claim 44. That is, Appellants' original disclosure points to structures 12.1, 12.2, and 22, see, e.g., Figures 3a and 3b, which are integrally formed in or on the lamella. However, RUF fails to provide any disclosure of such structures formed in or on the lamella, and certainly no such structures that are integrally formed in or on the lamella, as recited in at least independent claim 44.

At best, Appellants submit RUF discloses elements or pieces added to the lamella, such as end tips or strips. However, Appellants submit these elements or pieces are not the "structures" described in the application and recited in the pending claims. Still further, Appellants submit, as these elements or pieces in RUF are added to the lamella, and not integrally formed, as recited in at least independent claim 44, RUF fails to anticipate Appellants' invention. Thus, Applicants submit RUF fails to disclose at least the above-noted features of the present invention.

Thus, in contrast to the instant invention, which includes a lamella as a unitary

element having structures formed in or on the lamella surface, Figure 6 of RUF shows a "structure," as identified by the Examiner, attached to the lamella, which is an added element or piece. Therefore, Applicants submit RUF fails to provide any disclosure of a lamella having structures integrally formed, i.e., in one piece with, in or on the lamella surface, as recited in at least independent claim 44.

Because the applied reference of RUF fails to disclose each and every element recited in the claims, Appellant submits that RUF fails to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. §102(b). Accordingly, the Board is respectfully requested to reverse the Examiner's decision to finally reject independent claim 44 under 35 U.S.C. § 102(b).

Further, Applicants submit that, as RUF fails to anticipate the above-noted features with regard to the recited lamella and headbox, RUF certainly fails to disclose any of the subject matter related to the arrangement of the lamella elements and/or arrangement of the lamella within the headbox, as recited in at least claims 48 and 49. Moreover, Applicants submit that, as these claims recite additional features and/or arrangements of the lamella and/or headbox, these claims are separately patentable over RUF.

Claim 48:

Appellants submit claim 48 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of RUF fail to positively disclose the first surface is provided with a non-planar surface, as recited in claim 48.

Accordingly, Appellants submit the Examiner has failed to provide an adequate

evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit the rejection of claim 48 is improper and should be withdrawn.

Claim 49:

Appellants submit claim 49 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that disclosure and figures of KOCH fail to positively disclose the first surface is provided with a non-planar surface, as recited in claim 49.

Accordingly, Appellants submit the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Thus, Appellants submit that the rejection of claim 49 is improper and should be withdrawn.

Therefore, Appellant respectfully requests that the decision of the Examiner to finally reject claims 1 – 3, 11, 15, 17 – 23, 31, 35, 37 – 42, 44, and 48 - 50 under 35 U.S.C. § 102(b) be reversed, and that the application be remanded to the Examiner for withdrawal of the rejection over RUF and an early allowance of all claims on appeal.

**(D) The Rejection of Claims 12, 32, 46, and 51 – 53 Under 35 U.S.C. § 103(a) as Being Unpatentable Over RUF in View of SANFORD is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that, while RUF does not disclose a grooved surface, it would have been obvious to include such a surface in view of the disclosure of SANFORD. Applicants traverse the Examiner's assertions.

While arguably showing integrally formed structures formed in an upper surface of

the lamella, SANFORD fails to provide any teaching or suggestion that it would have been obvious to modify RUF to include such structures, such that no proper combination of the applied art can render the instant invention obvious under 35 U.S.C. § 103(a).

Moreover, as SANFORD fails to provide any teaching or suggestion the recited portion coupled to and sloped relative to a first surface, and a second surface, located opposite said first surface, provided with a structured end *adjacent said sloped portion* and having at least one structure integrally formed in or on said second surface, this document fails to provide the requisite motivation or rationale to modify RUF in any manner that would render the instant invention unpatentable.

Because neither applied document teaches or suggests at least one structure integrally formed in or on the second surface adjacent the sloped portion, no proper combination of these documents can render unpatentable the instant invention. Thus, Applicants submit that no proper combination of the applied art can render unpatentable the combination of features recited in at least independent claims 1, 22, and 44.

Moreover, while acknowledging that SANFORD shows a lamella having grooves forming in the lamella surface, Applicants submit that the art of record fails to provide any teaching or suggestion for combining the applied art in any manner that would render obvious to the present invention. In particular, Applicants acknowledge that Figures 7 and 9 arguably show grooves extending to the lamella end, such that the end of the lamella includes grooves, and has a wavy end shaped as shown in, e.g., Figure 4.

In contrast to SANFORD, the Examiner's attention is directed to Figure 2 of RUF, as well as the accompanying text, which discloses that tip t should be as exactly straight-lined as possible from side wall to side wall, i.e., it should be *as close as possible to parallel to*

*the outlet ends*, see RUF, column 4, lines 16 - 23. Thus, contrary to the teaching SANFORD, RUF expressly discloses an insertable lamella end having a specially designed tip to be exactly straight as possible, which teaches against the use of a wavy shaped lamella tip, as taught by SANFORD.

In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clamp*, 227 USPO 972 (BPAI 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Applicant's disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Notwithstanding the Examiner's statement in the rejection that it would have been obvious to modify RUF to include the grooved surface of SANFORD, Applicants contend that the Examiner has not presented or shown a reason articulable in the art of record *why* one of ordinary skill in the art would have been led to modify RUF in a manner contrary to its express disclosure. Moreover, Applicants note that an assertion that one ordinarily skilled in the art might combine the arrangements to tradeoff the benefits of one arrangement to gain certain benefits of the other arrangement is not a reason presented in the art of record, and therefore cannot be relied upon as motivation or rationale to support a rejection under 35 U.S.C. § 103(a).

It is respectfully submitted that the courts have long held that it is impermissible to use Applicants' claimed invention as an instruction manual or "template" to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious.

See *In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

Because RUF expressly discloses that the surfaces should be parallel in order to obtain the desired operation of the headbox, Applicants submit that the modification asserted by the Examiner is contrary to the express disclosure of RUF. That is, because SANFORD discloses a lamella having two grooved surfaces, Applicants submit that the asserted modification would be contrary to the express intention of RUF that tip t to be as exactly straight-lined as possible.

Applicants note that the specifically described arrangement enables RUF to operate in its desired manner, and there is no teaching or suggestion that utilizing a grooved surfaced lamella would enable to RUF to continue operating as intended. Thus, Applicants submit that the art of record fails to provide the requisite motivation or rationale for combining the art of record in the manner asserted by the Examiner. In particular, as the asserted combination appears to be contrary to express disclosure of RUF, Applicants submit that the instant rejection is improper and should be withdrawn.

Thus, Applicants submit that, as the art of record fails to teach or suggest the asserted modification of RUF in view of SANFORD, no proper combination of these applied documents can render unpatentable the invention recited in at least independent claims 1, 22, and 44. Moreover, as no proper combination of RUF in view of SANFORD renders unpatentable the combination of features with regard to the recited lamella and headbox, no proper combination of RUF in view of SANFORD can render unpatentable claims directed to the subject matter related to the arrangement of the lamella elements and/or arrangement of the lamella within the headbox, as recited in at least claims 12, 32, 46, and 51 - 53.

**Claim 12:**

Appellants submit claim 12 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said at least one structure is integrally formed in said structured end and comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 12.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 12 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 12 is improper and should be withdrawn.

**Claim 32:**

Appellants submit claim 32 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said at least one structure is integrally formed in said structured surface and comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 32.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 32 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 32 is improper and should be



withdrawn.

Claim 46:

Appellants submit claim 46 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said at least one structure is integrally formed in said structured surface and comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 46.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 46 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 46 is improper and should be withdrawn.

Claim 51:

Appellants submit claim 51 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said structured end comprises a grooved surface, as recited in claim 51.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 51 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 51 is improper and should be withdrawn.

## Claim 52:

Appellants submit claim 52 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, structured surface comprises a grooved surface, as recited in claim 52.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 52 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 52 is improper and should be withdrawn.

## Claim 53:

Appellants submit claim 53 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said structured surface comprises a grooved surface, as recited in claim 53.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 53 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 53 is improper and should be withdrawn.

Therefore, Appellant respectfully requests that the decision of the Examiner to finally reject claims 12, 32, 46, and 51 – 53 under 35 U.S.C. § 103(a) be reversed, and that the application be remanded to the Examiner for withdrawal of the rejection over RUF in view

of SANFORD and an early allowance of all claims on appeal.

**(E) The Rejection of Claims 4 – 10, 13, 14, 16, 24 – 30, 33, 34, 36, 43, and 45 – 47 Under 35 U.S.C. § 103(a) as Being Unpatentable Over RUF is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that the features recited in the instant claims are merely obvious design variants of the lamellae of RUF. Applicants traverse the Examiner's assertions.

Applicants note that, as RUF fails to anticipate the invention, as discussed above, and as RUF fails to provide any teaching or suggestion for modifying its design to integrally form the structures of the lamella in or on the surface of the lamella, as recited in at least independent claims 1, 22, and 44, no proper modification of RUF can render unpatentable the instant invention.

Moreover, Applicants respectfully traverse the Examiner's assertions that the above-noted claims are merely obvious design variants. Applicants note that, as discussed above, RUF discloses that the lamella end should be as straight as possible, whereas the instant invention provides a structured end. Moreover, as the straight end of RUF is provided to produce certain flows patterns in the suspension, there is no teaching or suggestion that modifications that may have been obvious in RUF would have been obvious in the present invention.

Because the art of record fails to provide any teaching or suggestion for modifying a lamella in accordance with at least independent claims 1, 22, and 44, as now amended, Applicants submit that the applied art fails to render unpatentable the combination of

features recited in the identified dependent claims.

As the art of record fails to teach or suggest the asserted modifications of either RUF, no proper modification of these documents can render unpatentable the invention recited in at least independent claims 1, 22, and 44. Moreover, as no proper modification of RUF renders unpatentable the combination of features with regard to the recited lamella and headbox, no proper modification of RUF can render unpatentable claims directed to the subject matter related to the arrangement of the lamella elements and/or arrangement of the lamella within the headbox, as recited in at least claims 4 - 10, 13, 14, 16, 24 - 30, 33, 34, 36, 43, and 45 - 47 .

Claim 4:

Appellants submit claim 4 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said sloped portion is oriented at an angle of between about 1.5° to 6° to said first surface, as recited in claim 4.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 4 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 4 is improper and should be withdrawn.

Claim 5:

Appellants submit claim 5 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and

SANFORD even arguably suggests, in combination, said angle is between about 2.5° to 5°, as recited in claim 5.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 5 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 5 is improper and should be withdrawn.

Claim 6:

Appellants submit claim 6 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said downstream lamella end has a height of between about 0.3 mm and 1.0 mm, as recited in claim 6.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 6 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 6 is improper and should be withdrawn.

Claim 7:

Appellants submit claim 7 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, the height is between about 0.4 mm and 0.6 mm, as recited in claim 7.

Accordingly, Appellants submit the art of record fails to render unpatentable the

combination of features including those recited in claim 7 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 7 is improper and should be withdrawn.

Claim 8:

Appellants submit claim 8 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said height is determined from a distance between an end of said sloped portion and said second surface, as recited in claim 8.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 8 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 8 is improper and should be withdrawn.

Claim 9:

Appellants submit claim 9 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said lamella has a predominant lamella thickness of between about 2 mm and 6 mm, as recited in claim 9.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 9 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 9 is improper and should be

withdrawn.

Claim 10:

Appellants submit claim 10 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said predominant thickness is about 4 mm, as recited in claim 10.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 10 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 10 is improper and should be withdrawn.

Claim 13:

Appellants submit claim 13 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said lamella is composed of at least one high-performance polymer, as recited in claim 13.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 13 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 13 is improper and should be withdrawn.

Claim 14:

Appellants submit claim 14 is allowable at least for the reason that it depends from

allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 14.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 14 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 14 is improper and should be withdrawn.

Claim 16:

Appellants submit claim 16 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, in combination with the headbox, wherein a flow velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 3 m/s, as recited in claim 16.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 16 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 16 is improper and should be withdrawn.

Claim 24:

Appellants submit claim 24 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the



present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said sloped portion is oriented at an angle of between about 1.5° to 6° to said first surface, as recited in claim 24.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 24 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 24 is improper and should be withdrawn.

Claim 25:

Appellants submit claim 25 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said angle is between about 2.5° to 5°, as recited in claim 25.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 25 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 25 is improper and should be withdrawn.

Claim 26:

Appellants submit claim 26 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said downstream lamella end has a height of between about 0.4 mm and 0.6 mm, as recited in claim 26.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 26 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 26 is improper and should be withdrawn.

Claim 27:

Appellants submit claim 27 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, the height is about 0.5 mm, as recited in claim 27.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 27 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 27 is improper and should be withdrawn.

Claim 28:

Appellants submit claim 28 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said height is determined from a distance between an end of said sloped portion and said second surface, as recited in claim 28.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 28 as obvious under 35 U.S.C. §

103(a). Thus, Appellants submit that the rejection of claim 28 is improper and should be withdrawn.

Claim 29:

Appellants submit claim 29 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said lamella has a predominant lamella thickness of between about 2 mm and 6 mm, as recited in claim 29.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 29 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 29 is improper and should be withdrawn.

Claim 30:

Appellants submit claim 30 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said predominant thickness is about 4 mm, as recited in claim 30.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 30 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 30 is improper and should be withdrawn.

Claim 33:

Appellants submit claim 33 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said lamella is composed of at least one high-performance polymer, as recited in claim 33.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 33 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 33 is improper and should be withdrawn.

Claim 34:

Appellants submit claim 34 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 34.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 34 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 34 is improper and should be withdrawn.

Claim 36:

Appellants submit claim 36 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the

present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, a flow velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 3 m/s, as recited in claim 36.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 36 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 36 is improper and should be withdrawn.

Claim 43:

Appellants submit claim 43 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, wherein said lamella is pivotably mounted in said headbox nozzle, as recited in claim 43.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 43 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 43 is improper and should be withdrawn.

Claim 45:

Appellants submit claim 45 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said sloped surface is obliquely

oriented relative to said first surface at an angle of between about 1.5° to 6° to said first surface, as recited in claim 45.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 45 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 45 is improper and should be withdrawn.

Claim 46:

Appellants submit claim 46 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said non-planar surface comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 46.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 46 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 46 is improper and should be withdrawn.

Claim 47:

Appellants submit claim 47 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Appellant submits that no proper combination of RUF and SANFORD even arguably suggests, in combination, said downstream lamella end has a

height, determined from a distance between an end of said sloped portion and said second surface, of between about 0.4 mm and 0.6 mm, as recited in claim 47.

Accordingly, Appellants submit the art of record fails to render unpatentable the combination of features including those recited in claim 47 as obvious under 35 U.S.C. § 103(a). Thus, Appellants submit that the rejection of claim 47 is improper and should be withdrawn.

Therefore, Appellant respectfully requests that the decision of the Examiner to finally reject claims 4 – 10, 13, 14, 16, 24 – 30, 33, 34, 36, 43, and 45 – 47 under 35 U.S.C. § 103(a) be reversed, and that the application be remanded to the Examiner for withdrawal of the rejection over RUF and an early allowance of all claims on appeal.

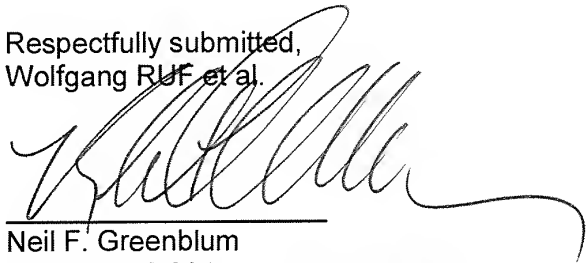
### **(C) Conclusion**

Claims 1 – 53 are fully in compliance with the requirements of 35 U.S.C. § 112, first paragraph, and 35 U.S.C. § 112, second paragraph; Claims 1 – 3, 11, 15, 17 – 23, 31, 35, 37 – 42, 44, and 48 – 50 are patentable under 35 U.S.C. § 102(b) over RUF; Claims 12, 32, 46, and 51 – 53 are patentable under 35 U.S.C. § 103(a) over RUF in view of SANFORD; and Claims 4 – 10, 13, 14, 16, 24 – 30, 33, 34, 36, 43, and 45 – 47 are patentable under 35 U.S.C. § 103(a) over RUF. Specifically, the applied art of record fails to anticipate or render unpatentable the unique combination of features recited in Appellant's claims 1 – 53. Accordingly, Appellant respectfully requests that the Board reverse the Examiner's decision to finally reject the pending claims and remand the application to the Examiner for withdrawal of the rejection.

Thus, Appellant respectfully submits that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. §112, second

paragraph, 35 U.S.C. §102(b), and 35 U.S.C. §103(a), and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,  
Wolfgang RUF et al.

A large, stylized handwritten signature in black ink, likely belonging to Neil F. Greenblum, positioned above a horizontal line.

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Attachments: Claims Appendix  
Evidence Appendix  
Related Proceedings Appendix



## 8) CLAIMS APPENDIX

The following listing of claims is a listing of all pending claims in the instant application:

### *Listing of Claims*

1. (Previously presented) A lamella of a headbox through which at least one fibrous suspension flows, the headbox having a machine-width headbox nozzle with a nozzle length and an exit opening, and the headbox nozzle being delimited by an upper nozzle wall and a lower nozzle wall, said lamella, which is structured and arranged to be mounted within the headbox nozzle, comprising:

a lamella body having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body; and

said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a structured end adjacent said sloped portion and having at least one structure integrally formed in or on said second surface.

2. (Original) The lamella in accordance with claim 1, wherein the lamella is structured and arranged to be mounted within the headbox nozzle supplying a suspension for forming paper, cardboard or tissue machine.

3. (Original) The lamella in accordance with claim 1, wherein said first surface is structured and arranged to be positioned to face one of the nozzle walls.

4. (Original) The lamella in accordance with claim 1, wherein said sloped portion is oriented at an angle of between about 1.5° to 6° to said first surface.

5. (Original) The lamella in accordance with claim 4, wherein said angle is between about 2.5° to 5°.

6. (Original) The lamella in accordance with claim 1, wherein said downstream lamella end has a height of between about 0.4 mm and 0.6 mm.

7. (Original) The lamella in accordance with claim 6, wherein the height is about 0.5 mm.

8. (Original) The lamella in accordance with claim 6, wherein said height is determined from a distance between an end of said sloped portion and said second surface.

9. (Original) The lamella in accordance with claim 1, wherein said lamella has a predominant lamella thickness of between about 2 mm and 6 mm.

10. (Original) The lamella in accordance with claim 9, wherein said predominant thickness is about 4 mm.

11. (Original) The lamella in accordance with claim 1 in combination with the headbox, wherein said lamella is located within the headbox nozzle and the upper nozzle wall in the area of the exit opening is coupled to an adjustable screen, and wherein said sloped portion is positioned toward the adjustable screen.

12. (Previously presented) The lamella in accordance with claim 1, wherein said at least one structure is integrally formed in said structured end and comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure,

(B) varying depth, and

(C) varying spacing.

13. (Original) The lamella in accordance with claim 1, wherein said lamella is composed of at least one high-performance polymer.

14. (Original) The lamella in accordance with claim 13, wherein said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU).

15. (Original) The lamella in accordance with claim 1, wherein said lamella has a length that is at least about 80% of the nozzle length.

16. (Original) The lamella in accordance with claim 1 in combination with the headbox, wherein a flow velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 5 m/s.

17. (Original) The lamella in accordance with claim 1, wherein said lamella is structured and arranged to be mounted in a headbox with sectioned consistency control.

18. (Original) The lamella in accordance with claim 1, wherein said lamella is structured and arranged to be mounted in a headbox designed for a stream velocity of more than about 1,500 m/s.

19. (Original) The lamella in accordance with claim 18, wherein the stream velocity is more than about 1,800 m/s.

20. (Original) The lamella in accordance with claim 1, wherein said lamella is structured and arranged to be mounted in a multi-layer headbox.

21. (Original) The lamella in accordance with claim 20, wherein said lamella is structured and arranged to be an intermediate lamella.

22. (Previously presented) A headbox for supplying at least one fibrous

suspension flows, comprising:

a headbox nozzle having an exit opening, said headbox nozzle and said exit opening being delimited by an upper nozzle wall and a lower nozzle wall;

a lamella mounted within said headbox nozzle having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body; and

said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, being a structured surface having at least one structure integrally formed in or on said second surface.

23. (Original) The headbox in accordance with claim 22, wherein said first surface is structured and arranged to be positioned to face one of the nozzle walls.

24. (Original) The headbox in accordance with claim 22, wherein said sloped portion is oriented at an angle of between about  $1.5^{\circ}$  to  $6^{\circ}$  to said first surface.

25. (Original) The headbox in accordance with claim 24, wherein said angle is between about  $2.5^{\circ}$  to  $5^{\circ}$ .

26. (Original) The headbox in accordance with claim 22, wherein said downstream lamella end has a height of between about 0.4 mm and 0.6 mm.

27. (Original) The headbox in accordance with claim 26, wherein the height is about 0.5 mm.

28. (Original) The headbox in accordance with claim 26, wherein said height is determined from a distance between an end of said sloped portion and said second surface.

29. (Original) The headbox in accordance with claim 22, wherein said lamella has a predominant lamella thickness of between about 2 mm and 6 mm.

30. (Original) The headbox in accordance with claim 29, wherein said predominant thickness is about 4 mm.

31. (Original) The headbox in accordance with claim 22, further comprising an adjustable screen coupled to said upper nozzle wall,

wherein said sloped portion is positioned toward the adjustable screen.

32. (Previously presented) The headbox in accordance with claim 22, wherein said at least one structure is integrally formed in said structured surface and comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure,

(B) varying depth, and

(C) varying spacing.

33. (Original) The headbox in accordance with claim 22, wherein said lamella is composed of at least one high-performance polymer.

34. (Original) The headbox in accordance with claim 33, wherein said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU).

35. (Original) The headbox in accordance with claim 22, wherein said nozzle has a nozzle length and said lamella has a length that is at least about 80% of said nozzle length.

36. (Original) The headbox in accordance with claim 22, wherein a flow

velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 5 m/s.

37. (Original) The headbox in accordance with claim 22, wherein said headbox is structured and arranged for sectioned consistency control.

38. (Original) The headbox in accordance with claim 22, wherein said headbox designed for a stream velocity of more than about 1,500 m/s.

39. (Original) The headbox in accordance with claim 38, wherein the stream velocity is more than about 1,800 m/s.

40. (Original) The headbox in accordance with claim 22, wherein said headbox comprises in a multi-layer headbox.

41. (Original) The headbox in accordance with claim 40, wherein said lamella is structured and arranged to be an intermediate lamella.

42. (Original) The headbox in accordance with claim 22, wherein said lamella is fixedly mounted in said headbox nozzle.

43. (Original) The headbox in accordance with claim 22, wherein said lamella is pivotably mounted in said headbox nozzle.

44. (Previously presented) A lamella for a headbox in a fibrous material web production machine, comprising:

a lamella body having a first and second surface and a mountable end and a downstream end remote from said mountable end;

said downstream end comprising a sloped surface obliquely oriented with respect to and coupled to said first surface and a second surface formed as a structured surface having at least one structure integrally formed in or on said second surface.

45. (Original) The lamella in accordance with claim 44, wherein said sloped surface is obliquely oriented relative to said first surface at an angle of between about 1.5° to 6° to said first surface.

46. (Previously presented) The lamella in accordance with claim 45, wherein said at least one structure is integrally formed in said structured surface and comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure,

(B) varying depth, and

(C) varying spacing.

47. (Original) The lamella in accordance with claim 44, wherein said downstream lamella end has a height, determined from a distance between an end of said sloped portion and said second surface, of between about 0.4 mm and 0.6 mm.

48. (Previously presented) The lamella in accordance with claim 1, wherein the first surface is provided with a structured surface.

49. (Previously presented) The lamella in accordance with claim 22, wherein the first surface is provided with a structured surface.

50. (Previously presented) The lamella in accordance with claim 44, wherein the first surface is provided with a structured surface.

51. (Previously presented) The lamella in accordance with claim 1, wherein said structured end comprises a grooved surface.

52. (Previously presented) The lamella in accordance with claim 22, wherein structured surface comprises a grooved surface.

53. (Previously presented) The lamella in accordance with claim 44, wherein said structured surface comprises a grooved surface.



(9) **EVIDENCE APPENDIX**

None.

(10) **RELATED PROCEEDINGS APPENDIX**

None.